

REMARKS

Claims 26, 28-30, 32-41, 44-46, and 48-52 are pending herein. Claims 51 and 52 are newly added. Claims 37 and 38 have been canceled.

1. Claims 26, 28-30, 32-46, and 48-50 were rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima et al. (2001/0006042) in view of Vaidya et al. (US 5076203). This rejection is respectfully traversed for the following reasons.

Claim 26 is drawn to a process for continuous deposition of a coating on an HTS tape. The process calls for translating a substrate along a substrate block, injecting an oxygen containing gas through the substrate block, and depositing a coating material on the substrate. The coating material is a buffer layer having a biaxial texture and over which an HTS layer is formed. Specifically, injecting the oxygen containing gas directly onto the substrate through the substrate block improves the texture of the buffer layer as compared to supplying the gas indirectly into the deposition chamber. Claim 48 is drawn to a process for continuous deposition of a coating on an HTS tape. The process specifically calls for translating a substrate along a substrate block including a plurality of gas channels and injecting an oxygen containing gas through the gas channels of the substrate block and onto the substrate during depositing to reduce an average texture of the buffer layer. Applicants empirically discovered that by injecting an oxygen containing gas through the coolant block and directly onto the substrate, the texture of the biaxially textured film can be significantly improved compared to injecting the oxygen containing gas elsewhere into the deposition chamber. It is believed that the concentration of oxygen at the substrate during deposition is increased, improving the reaction between the depositing species and oxygen, resulting in a more uniform buffer layer.

The PTO continues to rely upon Iijima et al. to allegedly teach the main features of the claimed invention, and Vaidya et al. to teach injecting gas through a porous substrate block. As Iijima et al. discloses supplying oxygen indirectly through the deposition chamber, Iijima et al. fails to recognize the significance of supplying oxygen gas directly through the substrate. Vaidya discloses a process for depositing a thin film

of metal in which a reaction with oxygen (oxidation of the metal) would be undesirable. Further, Vaidya et al. do not disclose a textured film and fail to recognize the associated benefits of improving the texture. Accordingly, Iijima et al. and Vaidya et al. fail to teach, suggest, or provide motivation for supplying an oxygen containing gas directly through the substrate block during depositing to improve the texture of a buffer layer. As such, the PTO has failed to establish a *prima facie* case of obviousness with respect to claims 26 and 48. Claims 28-30, 32-41, 44-46, 49, and 50 depend directly or indirectly from claim 26 and are allowable for at least the same reasons as claim 26. Therefore, Applicants respectfully request withdrawal of the 103(a) rejection over Iijima et al. and Vaidya et al. with respect to these claims.

Applicants respectfully submit that the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims.

Should the Examiner deem that any further action by the Applicants would be desirable for placing this application in even better condition for issue, the Examiner is requested to contact Applicants' undersigned representative at the number listed below.

The Commissioner is hereby authorized to charge any fees, which may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

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Date

/David A. Schell/

David A. Schell, Reg. No. 60,484

Agent for Applicant(s)

LARSON NEWMAN & ABEL, LLP

5914 West Courtyard Drive, Suite 200

Austin, TX 78730

(512) 439-7100 (phone)

(512) 439-7199 (fax)